08/907,63

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APPLICATION NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.
08/907,635	08/08/97	ENOKIDA	M 35.010457CON

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FITZPATRICK CELLA
HARPER & SCINTO
277 PARK AVENUE
NEW YORK NY 10172

EXAMINER
HONG, S

ART UNIT	PAPER NUMBER
2772	19

DATE MAILED: 02/18/98

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

OFFICE ACTION SUMMARY

☑ Responsive to communication(s) filed on _8-8-97_

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 D.C. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire _three_ month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☑ Claim(s) _1-13, 24-37 and 39_ is/are pending in the application.

Of the above, claim(s) _NONE_ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☑ Claim(s) _1-13, 24-39 and 39_ is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☑ The proposed drawing correction, filed on _____ is ☐ approved ☑ disapproved.

☐ The specification is objected to by the Examiner.

☑ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☑ Notice of Reference Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

— SEE OFFICE ACTION ON THE FOLLOWING PAGES —

PTOL-326 (Rev. 10/95)

* U.S GPO: 1996-409-290/40029

Part III   DETAILED ACTION

1.   This action is responsive to communications: pre-amendment and application filed 8/8/97, which is a FWC of the application Ser. No. 09/378,819, filed 1/27/95.

Priority

2.   Receipt is acknowledged of papers submitted under 35 U.S.C. § 119, which papers have been placed of record in the file.

Claim Rejections - 35 USC § 102

3.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

4.   Claims 1-4, 29-30, 32 and 36 are rejected under 35 U.S.C. 102(e) as being anticipated by <u>Bonomi</u>, U.S. Pat. No. 5,577,191, 11/96 (filed 2/94).

As per independent claim 1, Bonomi discloses the following claimed elements of a moving image editing apparatus:

- decoding means for decoding moving image data encoded by an encoding method that includes encoding in which interframe correlation is considered (col.2, line 54, "The

video compression circuit ...compress the video data ...using both interframe and intraframe

algorithm ...[and the] video decompression circuit decompresses intraframe-only compressed

video data to allow editing");

- storing means for intraframe coding the decoded moving image data and storing the

intraframe encoded image data (col.4, line 25, "...in FIG.2, intraframe-only compressed

video data is retrieved from storage" shows that the data have been stored.);

- editing means for decoding the image data which was stored in said storing means

and intraframe encoded, and for performing an arbitrary editing on the encoded image data

(col.2, line 57, "intraframe-only compressed video data ...allow video editing to occur in the

host processor."); and

- coding means for coding the edited image data by an encoded method that includes

encoding in which the interframe correlation is considered (col.2, line 59, "When the video

editing is complete, the video ....the video compression circuit to compress the video data

using both intraframe and interframe algorithm.").

As per dependent claim 2, Bonomi discloses that the **animating image data is**

transmitted from an external apparatus by communication (see "VTR", item 101, in

FIGs. 1 and 2).

As per dependent claim 3, Bonomi discloses **an edition in a time base direction**

between frames (col.1, line 52, "Typical editing activities include special effects, titling,

mixing, fades and wipes...").

As per dependent claim 4, Bonomi discloses **displaying the decoded image data** (col.3, line 52, "...decompressed the video data to display the video images on display").

Independent claim 29 recites substantially similar limitations as independent claims 1, and is similarly rejected under the same rationale. Furthermore, Bonomi discloses the additional limitations of: the encoding means for intraframe encoding the frame images of the minimum number which are necessary to decode the moving image data instructed by said instructing means in the moving image data stored in the memory (col.2, line 59, "When the video editing is complete, the video ....the video compression circuit to compress the video data using both intraframe and interframe algorithm; and col.1, line 26, "One such standard is the MPEG ...standard", which uses only the necessary frames for the compression.).

In addition, Bonomi discloses displaying the decoded image data so that an order of frame image forming the moving image data can be identified (col.3, line 52, "...decompressed the video data to display the video images on display").

As per dependent claim 30, Bonomi teaches that the encoding and the decoding are executed on the basis of a conversion program (see FIG.2, item "106 HOST CPU" which performs the conversion.).

As per dependent claim 32, Bonomi discloses that the interframe coding uses MPEG coding (col.1, line 26, "...MPEG..")

Independent claim 36 is for method performed by the apparatus in claim 1, and is similarly rejected under the same rationale.

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

6.   Claims 5-13, 24-28, 35, 37 and 39 are rejected and claims 24-28 and 39 are rejected under 35 U.S.C. § 103 as being unpatentable over Bonomi in view of Normille et al., U.S. Pat. No. 5,267,334, 11/93.

As per independent claim 5, Bonomi further teaches arbitrary editing and encoding the edited frame images (col.3, line 62, "Video editing can be accomplished using video editing software ...[on] host computer [which] retrieves selected frames..."), but does not explicitly teach the actual implementation of the decoding. However, Normille teaches the missing limitations: **detecting an intraframe** (col.7, line 59, "detecting a first scene ...known, in a preferred embodiment, as a ...intra frame"); and **decoding the image and a predetermined number of frames after the detected image** (col.7, line 66, "generating at least one intermediate compressed frame...containing difference information from the first image for at least one image following the first image in time in the sequence of moving images"). It

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would have been obvious to a person of ordinary skill in the art at the time the invention was made to have used Normille's detection and decoding means to decode Bonomi's compressed images, since Bonomi explicitly taught that the compression was done using both intraframe and interframe encoding, which was the same encoded frames that Normille used in decoding.

As per the limitation of decoding the moving image data of a predetermined number of frames including images to be edited by using the frame detected by the intraframe detecting means. Nevertheless, including the image to be edited in the decoded frames would have been obvious to a person of ordinary skill in the art at the time the invention was made, since Bonomi disclosed the motivation by teaching that "Video editing requires random access to frames...Thus, existing video editing systems use only intraframe compression (col.2, lines 6-12)" In other words, since Normille disclosed the interframe coded set of frames, Bonomi pointed out that they must be decoded into independent frames before editing take place.

As per dependent claim 6, Bonomi discloses that the intraframe encoded images after edited is recorded and stored in intraframe coding (col.2, line 59, "When the video editing is complete, the video ....the video compression circuit to compress the video data using both intraframe and interframe algorithm.").

Dependent claims 7 and 8 recite substantially similar limitations as those in claim 2, and are similarly rejected under the same rationale.

Dependent claims 9 and 10 recite substantially similar limitations as those in claim 3, and are similarly rejected under the same rationale.

As per dependent claims 11 and 12, Bonomi discloses decoding **from the intraframe just before the frame to be edited** (col.4, line 2, "...decompression and display on display ..[for] video editing").

Dependent claim 13 recites substantially similar limitations as those in claim 4, and is similarly rejected under the same rationale.

Independent claim 24 recites basically the same limitations as those in claim 1, and the similar rejections are rejected under the same rationale. In addition, claim 24 cites **decoding interframe coded image data in parallel with encoding intraframe image data**. First, parallel processing and multi-tasking were well known technique in the art. Given that, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to have performed the encoding and decoding in parallel, since when compressed data were decoded, the size of data increase greatly. Therefore, if all image data were decoded before they were encoded, the memory required to store the data would have been unpractical large.

Furthermore, as per the limitation of displaying the decoded image data so that an order of frame image forming the moving image data can be identified, Normille disclose the feature (see FIG.7a). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have incorporated the teaching of Normille, since Normille disclosed that the decoding of interframe coded frame require the sequential set of ordered frames (also see col.13, lines 56+).

Dependent claim 25 contains substantially similar limitation as claim 4, and is similarly rejected.

Dependent claim 26 recites substantially similar limitation as the one in claim 1, and is similarly rejected.

As per dependent claim 27, the means for accumulating animating images would have been obvious to one of ordinary skill in the art at the time the invention was made, since animation required multiple frames, and Bonomi explained that interframe coding was useful in reducing the size of the data (col.1, line 18, "To achieve a high compression ration, both interframe and intraframe compression ...are.... applied").

As per dependent claim 28, Bonomi does not disclose a computer program. But, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to have implemented Bonomi's apparatus with computer program, since one of ordinary skill in the art would have known that software implementation would have been less expensive.

As per dependent claim 35, Bonomi does not explicitly state that the frames created are created without a broken link. However, Normille disclosed that the frames are linked without the broken link (cols.7 and 8, in Summary and Objects of the Invention). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have incorporated the teaching of Normille, since Normille explained that the linked frames enabled the reverse play and forward play in animation.

Independent claims 37 and 39 are for method performed by the apparatus in claims 5 and 24, respectively, and are similarly rejected under the same rationale.

7.   Claims 31, 33 and 34 are rejected under 35 U.S.C. § 103 as being unpatentable over Bonomi in view of Nguyen, U.S. Pat. No. 5,404,437, 4/95 (filed 11/92).

As per dependent claim 31, Nguyen discloses **a cutting process in editing** (col.7, lines 5-16 describe a cut and paste routine on the images, as produced by the overlay.), and as per dependent claims 33 and 34, Nguyen discloses **animation images displayed in multi-screen displays that are obtained by reducing the frame images** (FIG.9 and col.9, lines 15-30). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined the teachings of Nguyen and Bonomi, since Nguyen taught the specific features of editing animation frames, and Bonomi explicitly suggested performing animation frame editions (col.1, line 52, "editing activities include special effects ...").

Response to Amendment

8.   Applicant's arguments with respect to claims 1-13, 24-37 and 39 have been considered but are deemed to be moot in view of the new grounds of rejection.

In view of the amendment that completely changed the scope of the claims (i.e., switching the phrases "interframe" and "intraframe" in the limitations), the previous rejections have been withdrawn. However, the new rejections are made in view of the new

grounds taught by Bonomi Patent. Therefore, the arguments are moot in view of the new

rejections.

Conclusion

9.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

5,675,693, Oct. 7, 1997, Video signal reproducing apparatus with plural search

functions; Junichi Kagoshima, 386/68

5,606,655, Feb. 25, 1997, Method for representing contents of a single video shot

using frames; Farshid Arman, et al., 345/440

5,371,547, Dec. 6, 1994, Apparatus for excising (and reinserting) specific data from

a compressed video data stream to reduce its transmission bandwidth; Robert J. Siracusa, et

al., 348/426

5,699,128, Dec. 16, 1997, Method and system for bidirectional motion compensation

for compression of motion pictures; Naoya Hayashi, 348/699

5,623,344, Apr. 22, 1997, Digital video recording device with trick play capability;

Frank A. Lane, et al., 386/81

10.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steve Hong whose telephone number is (703) 308-5465. The examiner can normally be reached on Monday-Friday from 8:00 AM-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather Herndon, can be reached on (703) 305-9701.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3900.

Any response to this action should be mailed to:
Commissioner of Patents and Trademarks
Washington, D.C. 20231
or faxed to:
(703) 308-9051, (for formal communications intended for entry)
Or:
(703) 305-9724 (for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington. VA., Sixth Floor (Receptionist).
Effective November 16, 1997, the Examiner handling this application will be assigned to a new Art Unit as a result of the consolidation into Technology Center 2700. See the forth coming Official Gazette notice dated November 11, 1997. For any written or facsimile communication submitted ON OR AFTER November 16, 1997, this Examiner, who was assigned to Art Unit 2412, will be assigned to Art Unit 2772. Please include the new Art Unit in the caption or heading of any communication submitted after the November 16, 1997 date. Your cooperation in this matter will assist in the timely processing of the submission and is appreciated by the Office.

Stephen Hong

Patent Examiner

February 4, 1998